

VASCULAR FLORA OF KENTUCKY:
ADDITIONS AND OTHER NOTEWORTHY
COLLECTIONS

MAX E. MEDLEY

Department of Biology, University of Louisville, Louisville, KY 40208

RAY CRANFILL

Department of Botany, University of California, Berkeley, CA 94720

and

JOHN W. THIERET

*Department of Biological Sciences, Northern Kentucky University,
Highland Heights, KY 41076*

As the Kentucky Floristic Survey proceeds, herbarium and field studies have turned up many additional records since our last installment (Cranfill and Thieret, 1981). Judging from floras of surrounding states, we anticipate that the total number of species of vascular plants in Kentucky will exceed 2500. With the current total in the neighborhood of 2200, we expect a large number of species are still to be found within the state. The south central counties (Clinton to Monroe north to Pulaski and Taylor) have been largely neglected by collectors and offer a high potential for new discoveries.

Our objectives in this paper are two: (1) to present data on species that represent additions to Kentucky's flora or that have been collected only once or twice before in the state and (2) to validate the occurrence of certain species reported for Kentucky by Short, Peter, and Griswold (1833) and by McFarland (1942). The validation of these lists is important because some of these species have not been reported elsewhere from Kentucky and because the vouchers for McFarland's records were destroyed by fire in 1947.

We consider taxa to be additions to our flora if they have not been reported previously for the state. We also include in this category plants ascribed to Kentucky in the literature but for which no additional information is provided and for which we can find no voucher, taxa from unpublished graduate theses, and taxa from publications with a minimal distribution. We include previously reported species only if they represent a second or third occurrence for Kentucky, constitute an unusual range extension, or document the rapid spread of noxious weeds.

Additions to the state's flora are preceded by an asterisk. In addition to those abbreviations found in Holmgren, Keuken, and Schofield (1981), the

following are required: KES: Herbarium, College of Agriculture, University of Kentucky, Lexington, Ky.; KNPC: Herbarium of the Kentucky Nature Preserves Commission, 407 Broadway, Frankfort, Ky.; MRE: Herbarium of the Department of Biology, Morehead State University, Morehead, Ky.; and WKU: Herbarium, Department of Biology, Western Kentucky University, Bowling Green, Ky.

Our thanks go to B. E. Wofford (University of Tennessee) and J. MacGregor (Kentucky Department of Fish and Wildlife) for notes on particular species and to the curators of many herbaria who assisted our studies. Our very special thanks go to L. R. Phillippe and R. Hannan of the Kentucky Nature Preserves Commission who have given us several records reported herein.

THUJA OCCIDENTALIS (L.) BSP. Pulaski Co.: west facing limestone cliffs above Buck Creek on N side of KY 80, 15 May 1980; *Medley & Cranfill 2094-80* (KNPC); east facing limestone bluffs above Buck Creek just N of KY 192, 20 Aug 1979, *Cranfill & Medley 4793* (KY, MEM). *Arbor vitae* was rediscovered in Kentucky by Medley and Wofford (1980), who noted several small plants on a boulder in the Big South Fork in McCreary County. The present populations number tens of trees, some very old, with reproduction apparent, indicating a less precarious existence for this species in Kentucky.

**ALOPECURUS PRATENSIS* L. Campbell Co.: meadow-like area off Beiting Drive, Alexandria, 4 May 1975, *Thieret 48449* (KNK). This species is introduced from Europe.

**ARTHRAOXON HISPIDUS* (Thunb.) Makino. Bracken Co.: in grass at edge of thickets along Ohio River just below Meldahl Lock and Dam, 13 Nov 1981, *Thieret 52763* (KNK). This species, a native of Japan, has become a serious pest in states to the south (Radford, Ahles, and Bell, 1968) and may yet become so in Kentucky.

**GYMNOPOGON BREVIFOLIUS* Trinius. Pulaski Co.: drier mounds in sandy wet meadow near Hazel Dell Church, 1 mi W of KY 39 and 10 mi N of Somerset, 3 Oct 1978, *Hannan & Phillippe 00600* (KNPC). According to Smith (1971), this species is nearly restricted to the coastal plain. Its occurrence in Kentucky, over 300 km from the nearest other station (in southern Tennessee) is remarkable.

**LEPTOLOMA COGNATUM* (Schult.) Chase. Fulton Co.: sandy woods, KY 313, 6.3 mi from Tennessee state line, 18 Aug 1968, *Fuller & Fuller 261* (MUR). This species occurs in the two Missouri counties adjacent to Kentucky (Steyermark, 1963).

**PANICUM TEXANUM* Buckl. Campbell Co.: railroad yard, Silver Grove, rare, 17 Oct 1981, *Nienaber 8* (KNK). This millet has been introduced into several southern states but has not become widely established.

**CAREX JOORII* Bailey. McCreary Co.: wet depression on N side of KY 92, ca 2.5 mi W of South Fork of Cumberland River, 31 Jul 1980, *Medley*

2704-80 (KNPC). This population forms several large tussocks in ditches on the north side of the road and is disjunct from populations in Cumberland County, Tennessee.

**CAREX LAXICULMIS* Schwein. Hardin Co.: dry, calcareous oak-hickory woods, 4 km W of Summit, 26 May 1979, *Cranfill* 4331 (KY, MEM). This species was reported by McFarland (1942) without locality.

**MURDANNIA KEISAK* (Hassk.) Hand.-Maz. Floyd Co.: swamp near headwaters of Dewey Lake, 6 mi E of Prestonsburg, 8 Aug 1982, *Thieret* 53752 (KNK). Knox Co.: along muddy edge of stream, 0.6 mi N of Dent along KY 223, 8 Jun 1978, *Camburn s.n.* (KNPC). Dennis et al. (1980) reported the spread of this species from northern Alabama to Tennessee in the TVA reservoir system.

**JUNCUS DUDLEYI* Wieg. Madison Co.: Central Kentucky Wildlife Management Center, 8 mi N of Berea, 11 Jul 1978, *Lassetter* 3049 (EKU, KNK). Rowan Co.: grassy, muddy shore of Cave Run Lake, 6 Aug 1977, *Thieret* 50187 (KNK). This rush occurs in Ohio (Braun, 1967) and is scattered throughout Tennessee.

**JUNCUS INTERIOR* Wieg. Pendleton Co.: damp, sandy beach of Kincaid Lake, 30 Jul 1977, *Thieret* 50107 (KNK). Rowan Co.: grassy, muddy shore of Cave Run Lake, 6 Aug 1977, *Thieret* 50183 (KNK). *Juncus interior* is a species of the plains and extends eastward in the Prairie Peninsula to Indiana with a single locality in central Ohio. Its occurrence in Kentucky probably represents an introduction.

**JUNCUS SECUNDUS* Beauv. ex Poir. Hardin Co.: rocky sandstone exposures along the Illinois Central Railroad near its junction with Old Meeting Creek Rd., 12 Aug 1979, *Cranfill* 5044 (KY, MEM). The present population is but a short distance from a Washington County, Indiana, station (Deam, 1940). As with the previous rushes, this species is inconspicuous and probably overlooked.

AMIANTHIUM MUSCAETOXICUM (Walt.) Gray. Harlan Co.: Briarfield Gap, 9.6 mi from Caywood, 28 Sep 1978, *Hannan & Phillippe s.n.* (KNPC). Bell Co.: Cumberland Gap National Historical Park, Cove at 2000 ft., 21 Jun 1974, *Hinkle* 49310 (TENN). These are the first collections of this species from Kentucky in over a century.

**ALLIUM BURDICKII* (Haynes) A. G. Jones. Oldham Co.: Pond Creek, wooded ravine, 12 May 1980, *Medley & Bryan* 1252-80 (KNPC).

PLATANThERA CRISTATA (Michx.) Lindl. McCreary Co.: scattered, edge of pond between old and new US 27, ca ½ mi N of state line, 31 Jul 1980, *Medley* 2718-80 (KNPC); streamhead seep ca 0.25 mi E of old US 27, just N of Tennessee state line, 3 Aug 1980, *Cranfill & MacGregor* 5269 (KY, MEM). Rogers (1941) reported finding a single individual of this species near Pine Knot, McCreary County. Our collections are the first in Kentucky in 40 years.

PLATANThERA PSYCODES (L.) Lindl. Harlan Co.: edge of small wooded

stream, and in grassy area, headwater of Clark Fork, top of Big Black Mountain, 12 Jun 1980, *Medley 2291-80* (KNPC). This is the first Kentucky collection of this species in 32 years.

**HEXASTYLIS CONTRACTA* Blomquist. McCreary Co.: mesophytic forest, South Fork of the Cumberland River, 6 Apr 1934, *Braun 656* (US). The occurrence of this species in Kentucky is not surprising since it is found throughout the Cumberland Plateau of Tennessee. The specimen was determined by Braun as *H. virginica* (L.) Small.

**ERIOGONUM LONGIFOLIUM* Nutt. var. *HARPERI* (Goodm.) Reveal. Christian Co.: prairie-like area between US 41 and railroad near Kelly, 28 Aug 1980, *Medley 2795-80* (KNPC). Our collection extends the range northwest from De Kalb, Putnam, and Wilson counties, Tennessee (Patrick, 1979; Watson and Rogers, 1972; Wofford and Dennis, 1976). Reveal (1968) reduced this rare plant to varietal status under *E. longifolium*, a plains species.

**SALSOLA KALI* L. Campbell Co.: along railroad tracks, Silver Grove, 4 Oct 1981, *Buddell 450* (KNK). Kenton Co.: along railroad tracks, Covington, 11 Aug 1978, *Applegarth 468* (KNK). Garman (1941) reported receiving a specimen of Russian thistle from Russellville, Logan County, and McFarland (1942) reported the species from Kentucky but without locality or citation of specimen. Most American authors treat the Russian thistle as *S. kali* var. *tenuifolia* G.F.W. Mey.

**AMARANTHUS PALMERI* S. Wats. Campbell Co.: along railroad tracks, Silver Grove, 27 Sep 1981, *Buddell 431* (KNK). A native of the southwest, *A. palmeri* is adventive east of Oklahoma and Texas.

**STELLARIA AQUATICA* (L.) Scop. Campbell Co.: in mat of *Eragrostis hypnoides* on sandy/silty shore of Ohio River, Silver grove, 27 Sep 1981, *Buddell & Thieret 481* (KNK).

**CERATOPHYLLUM MURICATUM* Cham. Logan Co.: in woodland pond with *Wolffiella*, Keysburg Rd., ca 2 mi W of Keysburg, 24 Apr 1982, *Thieret & Medley 52790* (KNK). This species was formerly known as *C. echinatum* Gray. According to Fassett (1953), it is confined mostly to the Mississippi Valley and northern Atlantic Coastal Plain.

**CALTHA PALUSTRIS* L. Jefferson Co.: marshes around Louisville, Jun 1884, *Museller s.n.* (KY). County not given: Beard Branch near Lexington, n.d., *Short s.n.* (PH). *Caltha* has not been found in Kentucky for nearly a century.

**CLEMATIS TERNIFLORA* DC. Bourbon Co.: bank of Stoner Creek, 4 Jun 1964, *Gubardja 128* (KY). Fayette Co.: abundant in fence row, 26 Jun 1980, *Cranfill 5039* (KY, MEM). Franklin Co.: empty lot in Frankfort, 5 Sep 1981, *Medley 3091-81* (KNPC). Hardin Co.: railroad yard, Elizabethtown, 25 Jun 1980, *Cranfill 5225* (KY, MEM). Few vines match the obnoxious behavior of *Lonicera japonica*; the present species—formerly known as *C. diosoreifolia* Levl. & Vaniot—is an exception.

**MAGNOLIA PYRAMIDATA* Bartram ex Pursh. Fulton Co.: bottomlands near the Mississippi River, ca 2/3 km downstream from Hickman, 10 Oct 1970, *Byrne 4* (KY). Leaf morphology, habitat, and geographic position lead us to the above determination—the specimen is sterile.

**CAMELINA MICROCARPA* Andrz. Campbell Co.: weedy roadside, NKU Campus, 21 May 1974, *Thieret 48221* (KNK). Although *C. microcarpa* was reported (without citation of specimens) as a component of the Kentucky flora by McFarland (1942) and Reed (1970), we have seen no material of it other than our own.

**DESCURAINIA SOPHIA* (L.) Webb ex Prantl. Campbell Co.: railroad yard, Silver Grove, 9 Jul 1974, *Thieret 48240* (KNK).

**RORIPPA AUSTRIACA* (Crantz) Besser. Campbell Co.: roadside, Highland Heights, 4 Jun 1976, *Thieret 48934* (KNK). *Rorippa* in North America was recently monographed by Stuckey (1972).

**DROSERA BREVIFOLIA* Pursh. Pulaski Co.: in low, bare spot in moist sandy meadow, just N of Hazel Dell Church, 15 May 1980, *Medley & Cranfill 2095-80* (KNPC, KY). The flat sandy meadows of Pulaski County bear some resemblance to the barrens of the Highland Rim of Tennessee where a number of coastal plain disjuncts occur. As with *Gymnopogon brevifolius*, the nearest station for this sundew is in Coffee County, Tennessee.

**DROSERA INTERMEDIA* Hayne. County not given ("Kentucky"): n.d., *Price s.n.* (KES). Dr. Ronald L. Stuckey of the Ohio State University has provided us with label data from a specimen of *D. intermedia*—"Licking River (Kentucky), Mr. Peck"—from the Short Herbarium (PH).

**SEDUM ACRE* L. Pulaski Co.: abundant on limestone outcrops in pasture on N side of KY 80, 13 Jun 1982, *Cranfill 5010* (KY, MEM). Clausen (1975) did not mention this species for Kentucky. We have not been able to verify Gunn's (1968) report.

**CHRYSOSPLENIUM AMERICANUM* Schwein. Harlan Co.: Pine Mountain Settlement School, 6 May 1974, *Garrison s.n.* (KY). *Chryso-splenium* is characteristic of cold brooks in the southern Appalachians but is inconspicuous and often overlooked.

**PARNASSIA ASARIFOLIA* Vent. McCreary Co.: low sphagnum boggy, ravine, 12 Oct 1940, *Rogers 65* (MRE). This species is abundant in similar habitats in the northern Cumberland Plateau in Tennessee and was to be expected in Kentucky.

**PARNASSIA GRANDIFOLIA* DC. Clinton Co.: dripping, calcareous ledges above Seventy Six Fall, 28 Sep 1980, *Cranfill 5404* (KY, MEM). This species is scattered throughout the southern Appalachians and was to be expected in Kentucky. At this site it was associated with *Carex leptalea*, another rare Kentucky plant.

**GEUM LACINIATUM* Murr. Boyd Co.: along railroad tracks between Russell and Raceland, 6 Jun 1979, *Thieret 50982* (KNK). Campbell Co.: grassy, meadow-like area, Silver Grove, 30 May 1981, *Thieret 52584* (KNK).

*RHODOTYPOS SCANDENS (Thunb.) Makino. Jefferson Co.: naturalized at base of limestone bluff, Louisville, 6 Nov 1981, *Medley & Hotchkiss 3529-81* (DHL). The record in Gunn (1968) was from a cultivated specimen.

*SANGUISORBA CANADENSIS L. Letcher Co.: edge of waterfall in Bad Branch, Pine Mountain, 5 Oct 1978, *Hannan & Phillippe 00705* (KNPC). This collection constitutes a range extension of over 200 km westward from the mountains of Greenbriar County, West Virginia.

RHYNCHOSIA TOMENTOSA (L.) Hook. & Arn. Christian Co.: prairie-like area between US 41 & railroad, near Kelly, 28 Aug 1980, *Medley 2794-80* (KNPC). Our material is var. *tomentosa* and extends the range of this taxon westward by about 175 miles (Gear, 1978).

*EUONYMUS ALATUS (Thunb.) Regel. Jefferson Co.: naturalized along base of limestone bluff, Louisville, 6 Nov 1981, *Medley & Hotchkiss 3530-81* (DHL). Reported by Martin et al. (1979) in a publication with limited distribution. The report by Gunn (1968) was possibly based on a cultivated specimen.

ACER SPICATUM Lam. Adair Co.: ca 7 mi N of Columbia, 6 Jul 1958, *Gibson 129* (US). Harlan Co.: Big Black Mountain, dripping ledges along KY 160 at elevation of 1300 m, 3 May 1981, *Cranfill 5429* (KY, MEM). Pulaski Co.: in loose rocky talus at foot of limestone bluffs along Buck Creek, KY 1003, 24 May 1979, *Cranfill & Meijer 4212* (KY, MEM). We have been unable to verify the statement in Wharton and Barbour (1973) that *A. spicatum* "was reported a century ago in four [Kentucky] counties of the Cumberland Plateau." According to our records, this species had been verified in Kentucky from only Carter County, Braun, 1943). The above-cited collections represent significant range extensions to the south and west. The Pulaski and Carter county sites are microclimatically similar due to issuance of cool, subterranean air that moderates summer heat. Like *Maianthemum canadense* and *Taxus canadensis*, *A. spicatum* was pushed south by Pleistocene glaciation and has persisted in suitable sites.

*RHAMNUS FRANGULA L. Jefferson Co.: along railroad, Louisville, 6 Jun 1979, *Thieret 50982* (KNK). This species is becoming a pest in bogs and riparian situations in states north of Kentucky.

*HERACLEUM LANATUM Michx. Harlan Co.: wooded ridge in oak-hickory forest, on state line gravel rd. N of KY 160, Big Black Mountain, 12 Jun 1980, *Medley 2280-80* (KNPC). This species was photographed by Braun (1940) in Letcher County but not collected. The present specimen verifies the occurrence of cow-parsnip in the state.

*LEUCOTHOE RECURVA (Buckley) Gray. Letcher Co.: adjacent to rock outcrop, 1 stream km NE of mouth of Bad Branch, Pine Mountain, 15 Jul 1980, *Harker & Phillippi s.n.* (KNPC). This species, restricted to the southern Appalachians, was to be expected in Kentucky.

*RHODODENDRON MINUS Michx. Bell Co.: rocky ledges above Colmar, 15 Jun 1973, *Carr s.n.* (KY). McCreary Co.: woods by road leading into Cumberland Falls State Park, 1 Aug 1980, *Medley & Rogers 2744-80* (KNPC). The Bell County station has probably been extirpated by strip mining. The McCreary County population, the first for the Cumberland Plateau, may represent an introduction. It is interesting to note, though, that *Leiophyllum* is also known from the area. Both stations are considerably to the north and west of those reported by Duncan and Pullen (1962).

*NYMPHOIDES PELTATA (Gmel.) Kuntze. Bullitt Co.: shallow water at edge of small lake, 8 Sep 1981, *Medley & Hotchkiss 3141-81* (DHL). Stuckey (1974) provided an account of the introduction and spread of this species in North America.

*MATALEA CAROLINENSIS (Jacq.) Woodson. Cumberland Co.: 12 mi N of Burkesville on KY 61, roadside, 14 Jun 1972, *Anderson 8* (WKU). This species was credited to Kentucky by Radford, Ahles, and Bell (1968); we found no voucher at NCU. The stations nearest to the present collection are over 100 km away in the central basin of Tennessee.

*ELLISIA NYCTELEA (L.) L. Campbell Co.: weed in yard, Dayton, 7 May 1981, *Buddell 280* (KNK). Previously reported by Nelson (1919) but no voucher is known. Constance (1940) noted the potential weediness of this species.

*CYMBALARIA MURALIS Gaertn., Mey., & Schreb. Franklin Co.: Clinton St., limestone walls, Frankfort, 9 Sep 1978, *Medley & MacGregor 271-78* (KY). Previously reported by Garman (1914) without locality or citation of specimen.

*MECARDONIA ACUMINATA (Walt.) Small. Pulaski Co.: ditch near Hazel Dell Church, 25 Aug 1979, *Medley & Cranfill 1592-79* (KNPC). Simpson Co.: moist soil, roadside, US 31 W, 0.125 mi S of Warren County line, 20 Aug 1978, *Medley 237-78* (KNPC). This species was not reported for Kentucky by Pennell (1935).

*VERONICA HEDERAEFOLIA L. Campbell Co.: in wooded ravine, Silver Grove, 20 Apr 1979, *Thieret s.n.* (KNK). Franklin Co.: wooded slope, S of Leawood Dr., behind apartment building, 12 May 1978, *Medley 033-78* (KNPC). This speedwell was reported in Martin et al. (1979), but the publication had a limited distribution.

*OROBANCHE RAMOSA L. Woodford Co.: parasitic on roots of tobacco, Van Shipp farm on Old Frankfort Pike, 15 Aug 1977, *Cranfill 2846* (KY, MEM). Previously reported by Garman (1914) from Kentucky hempfields but without citation of specimen or locality.

*GALIUM MOLLUGO L. Campbell Co.: grassy roadside, Silver Grove, 15 May 1981, *Buddell 283* (KNK). Kenton Co.: weedy roadside, 1 mi W of Bromley, 1 Jul 1978, *Applegarth 275* (KNK). Lewis Co.: shallow ditch, S side Holly Branch Rd., 31 May 1980, *Medley 2265-80* (KNPC).

*VIBURNUM OPULUS L. var. OPULUS. Campbell Co.: shrubby area at

edge of woods, Bellevue, 15 Oct 1973, *Thieret* 41273 (KNK). Kenton Co.: shrub to 8 ft, in *Fraxinus-Robinia* woods 0.3 mi NE of Fort Mitchell, 10 Sep 1976, *Applegarth* 145 (KNK).

**CAMPANULA RAPUNCULOIDES* L. Fayette Co.: weed among shrubs adjacent to Chemistry-Physics Building, University of Kentucky campus, Lexington, 31 May 1977, *Grayum* 718 (KY). These plants were still persisting in 1982; presumably they are a garden escape.

**ASTER TATARICUS* L.f. Campbell Co.: large colony on slope above road, California, 27 Sep 1980, *Thieret* 52456 (KNK). Carter Co.: roadside near Carter Caves State Park, 4 Oct 1978, *Medley* 416-78 (KNPC). This species is an escape from gardens.

**CREPIS CAPILLARIS* (L.) Wallr. Campbell Co.: weedy area, Highland Heights, 26 Jun 1978, *Thieret s.n.* (KNK). Reported by Harvill (1941) for Fayette County; we have seen no collections other than our own.

REFERENCES

- BRAUN, E. L. 1940. An ecological transect of Black Mountain, Kentucky. *Ecol. Monogr.* 10: 193-241.
- . 1943. An annotated catalog of spermatophytes of Kentucky. Published by the author, Cincinnati. 161 pp.
- . 1967. The Monocotyledonae. Cat-tails to orchids. Ohio State University Press, Columbus, Ohio. 464 pp.
- CLAUSEN, R. T. 1975. *Sedum* of North America north of the Mexican Plateau. Cornell University Press, Ithaca, New York. 742 pp.
- CONSTANCE, L. 1940. The genus *Ellisia*. *Rhodora* 42: 33-39.
- CRANFILL, R. and J. W. THIERET. 1981. Thirty additions to the vascular flora of Kentucky. *Sida* 9: 55-58.
- DEAM, C. C. 1940. Flora of Indiana. Department of Conservation, Division of Forestry, Indianapolis, Indiana. 1236 pp.
- DENNIS, W. M., D. H. WEBB, E. B. WOFFORD and R. KRAL. 1980. State records and other recent noteworthy collections of Tennessee. III. *Castanea* 45: 237-242.
- DUNCAN, W. H. and T. H. PULLEN. 1962. Lepidote rhododendrons of the southeastern United States. *Brittonia* 14: 290-298.
- FASSETT, N. C. 1953. North American *Ceratophyllum*. *Commun. Inst. Trop. Invest. Ci. Univ. El Salvador* 2: 25-45.
- GARMAN, H. 1914. Some Kentucky weeds and poisonous plants. *Bull. Kentucky Agric. Exp. Sta.* 183: 255-339.
- GREAR, J. W. 1978. A revision of the New World species of *Rhynchosia* (Leguminosae, Faboideae). *Mem. New York Bot. Gard.* 31(1): 1-168.
- GUNN, C. R. 1968. The flora of Jefferson and seven adjacent counties, Kentucky. *Ann. Kentucky Soc. Nat. Hist.* 2: 1-322.
- HARVILL, A. M. 1941. A contribution to the Compositae of Kentucky. Master's thesis, University of Kentucky, Lexington, Kentucky. 85 pp.
- HOLMGREN, P. K., W. KEUKEN and E. K. SCHOFIELD. 1981. Index herbariorum. Part I. The herbaria of the world. 7th ed. *Regnum Veg.* 106: 1-452.
- McFARLAND, F. T. 1942. A catalogue of the vascular plants of Kentucky. *Castanea* 7: 77-108.
- MARTIN, W. H., W. S. BRYANT, J. S. LASSETTER and J. B. VARNER. 1979. The Kentucky River Palisades. Flora and vegetation. The Kentucky Chapter of the Nature Conservatory, [Lexington, Kentucky]. 240 pp.

- MEDLEY, M. E. and B. E. WOFFORD. 1980. *Thuja occidentalis* L. and other noteworthy collections from the Big South Fork of the Cumberland River in McCreary County, Kentucky. *Castanea* 45: 213–215.
- NELSON, J. C. 1919. Plants of Boone County, Kentucky. *Proc. Indiana Acad. Sci.* 28: 125–143.
- PATRICK, T. S. 1979. Final report: Upper Cumberland River flora project. Prepared for the Tennessee Heritage Program and the Ohio River Basin Commission. Department of Botany, University of Tennessee, Knoxville. 75 pp.
- PENNELL, F. W. 1935. The Scrophulariaceae of eastern temperate North America. *Acad. Nat. Sci. Philadelphia Monogr.* 1: 1–650.
- RADFORD, A. E., H. E. AHLES and C. R. BELL. 1968. Manual of the vascular flora of the Carolinas. University of North Carolina Press, Chapel Hill, North Carolina. 1183 pp.
- REED, C. F. 1970. Selected weeds of the United States. U.S.D.A. Agric. Handbook 366. 463 pp.
- REVEAL, J. L. 1968. Notes on the Texas eriogonums. *Sida* 3: 196–205.
- ROGERS, H. J. 1941. The flora of McCreary County, Kentucky. Master's thesis, University of Kentucky, Lexington, Kentucky. 111 pp.
- SHORT, C. W., R. PETER and H. A. GRISWOLD. 1833. A catalogue of the native phaenogamous plants, and ferns of Kentucky. *Transylvania J. Med. Assoc. Sci.* 6: 490–501.
- SMITH, J. P. 1971. Taxonomic revision of the genus *Gymnopogon* (Gramineae). *Iowa State Coll. J. Sci.* 45: 319–385.
- STEYERMARK, J. A. 1963. Flora of Missouri. Iowa State University Press, Ames, Iowa. 1725 pp.
- STUCKEY, R. L. 1972. Taxonomy and distribution of the genus *Rorippa* (Cruciferae) in North America. *Sida* 4: 279–430.
- . 1974. The introduction and distribution of *Nymphoides peltatum* (Menyanthaceae) in North America. *Bartonia* 42: 14–23.
- WATSON, J. R. and K. E. ROGERS. 1972. *Eriogonum harperi* Goodman in Tennessee. *Rhodora* 74: 154.
- WHARTON, M. E. and R. W. BARBOUR. 1973. Trees and shrubs of Kentucky. The University Press of Kentucky, Lexington, Kentucky. 583 pp.
- WOFFORD, B. E. and W. M. DENNIS. 1976. State records and other recent noteworthy collections of Tennessee plants. *Castanea* 41: 119–121.